363.62
R265x

ILLINOIS COMMERCE COMMISSION

DEPOSITORY
JAN 3 1 1986
UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN

Regulation of Electricity
Sales-for-Resale and Transmission Service:

COMMENTS OF THE
ILLINOIS COMMERCE COMMISSION
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Illinois Commerce Commission
527 East Capitol Avenue
P.O. Box 4905
Springfield, Illinois 62708

Printed by authority of the State of Illinois
145 — November 1985 — No. 355

UNIVERSITY OF
ILLINOIS LIBRARY
AT URBANA-CHAMPAIGN

OPEN SHELF

REGULATION OF ELECTRICITY SALES-FOR-RESALE AND TRANSMISSION SERVICE:

COMMENTS OF THE ILLINOIS COMMERCE COMMISSION BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

To renew call Telephone Center, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

MAR 0 9 1987

JAN 0 1995

APR 13 1995

MAY 0 2 1997

APR 2 4 1997

L161—O-1096

P.O. Box
Springfield, Illinois 62708

UNIVERSITY OF
ILLINOIS LIBRARY
AT URBANA-CHAMPAIGN

REGULA
SALES-FOR-RESA

I

FEDERAL ENE

Illinois Commerce Commission
527 East Capitol Avenue
P.O. Box 4905
Springfield, Illinois 62708

363.62
R 265x

INTRODUCTION

During the last several years the issue of the appropriate regulation of wholesale electricity has been gaining prominence. This has been brought about by the emergence of new experiments in electricity pricing flexibility and relaxed regulation. As a result of this interest in competition in the wholesale market, the Federal Energy Regulatory Commission (FERC) opened docket RM85-17 and issued Notices of Inquiry (NOIs). The NOIs asked for comments on specific questions that FERC believed needed to be addressed in reaching a decision on altering its present policies governing wholesale electricity transactions and transmission service. The Phase I NOI was issued by FERC on May 30, 1985 and dealt with the pricing of wholesale electricity in short term markets and with transmission service. The Phase II NOI was issued by FERC on June 28, 1985 and dealt with the pricing and risk allocation of long term wholesale transactions.

This report contains the Illinois Commerce Commission's responses to the notices printed in their entirety. While an executive summary discusses the main points in each document, it is clear that the central thrust of both documents is that competition could provide for more efficient wholesale markets for electricity. The Commission argues that a key element to competitive markets in general and competitive electricity markets in particular is a sufficient number of buyers and sellers. In the electric industry these buyers and sellers would receive access to the wholesale market through the willingness of, or requirement for, a utility to transmit power across its transmission system on a nondiscriminatory basis. Providing access at just and reasonable rates would allow more players to be involved in the sale or purchase of power. Thus, access would foster the competitive market environment necessary to the effective use of flexible pricing schemes considered in the NOIs. Increased competition predicated an open access would provide greater efficiency in wholesale electricity markets and concomitant benefits to electricity consumers.

Where open access is not provided, the Commission still believes that substantial improvement in the pricing of long term wholesale electricity is possible by making the basis of those sales consistent with the pricing of short term economy transactions. The Commission calls for a reservation charge plus an energy charge based on the actual marginal energy costs at the time the power is taken. This policy would overcome the inefficiencies produced by selling wholesale short-term electricity on a marginal energy cost basis and long-term electricity on an embedded cost basis.

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Regulation of Electricity Sales-for-Resale and Transmission Service	)))	Docket No. RM85-17-000 (Phase I)

COMMENTS OF THE

ILLINOIS COMMERCE COMMISSION

Dr. Thomas E. Kennedy
Director - Energy Program
Policy Analysis & Research Division

Dated: August 7, 1985

Digitized by the Internet Archive
in 2019 with funding from
University of Illinois Urbana-Champaign Alternates

https://archive.org/details/regulationofelec00illi

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission (FERC) in Docket RM85-17-000 is evaluating its present policies governing wholesale electricity transactions and transmission service. FERC's stated objectives are to determine whether its policies promote, or whether they impede, efficiencies in electricity markets and to evaluate alternative policies. The notice of inquiry is in two phases. Phase I (NOI-I) addressed here was issued May 30, 1985, and considers coordination transactions and transmission service. Phase II was issued June 28, 1985, and considers requirements service.

The Illinois Commerce Commission (ICC) is the state governmental body which regulates retail electric sales within Illinois. The ICC welcomes this investigation into methods of improving efficiency in the wholesale market and believes that such improvements would result in lower rates to retail customers.

The ICC believes that greater reliance on competitive forces where appropriate is crucial to improving efficiency and to extending the benefits of that improved efficiency to consumers. Critical to the successful use of competitive forces is the creation of an environment which is conducive to competition. Central to that environment is access to transmission services. A key element in an effectively competitive market is a sufficient number of buyers and sellers. In the electric industry these buyers and sellers would receive access to the wholesale market through the willingness of, or requirement for, a utility to wheel (transmit) power across its transmission system on a nondiscriminatory basis.

The parallels to the natural gas industry are too compelling to disregard. The Natural Gas Policy Act of 1978 set in motion the deregulation of natural gas at the wellhead. However, the benefits of competition at the wellhead were largely foreclosed to natural gas pipeline customers because pipelines were able to provide the transportation of gas on a discriminatory basis. FERC proposed rules on May 30, 1985, in docket RM85-1-000 which would encourage open access to gas transportation. The ICC submitted comments in that docket which strongly supported open access. Just as FERC recognized the

importance of access to transportation in the natural gas industry, it should also recognize the importance of transportation (transmission) to an efficient electric industry. FERC should encourage wheeling and also ask Congress for broader powers to require wheeling.

It is the view of the Illinois Commerce Commission that substantial benefits may be obtained through moving toward a more competitive market for electricity generation. It is clear that the current situation of higher prices in the face of abundant generation capacity is inconsistent with the behavior of a competitive market. Prices have not responded to changes in supply and demand. Consumers receive price signals that indicate scarcity at a time when supplies are more than adequate; conversely, prices are held down by regulation in periods of shortage, exacerbating the shortage. Competition in the generation sector of the industry would improve the price signals given to customers.

Regulation has evolved over a number of years, and careful consideration must be given to a transition to greater reliance on competition. The industry can, however, be smoothly transformed into a competitive, market-oriented industry by providing access to the transmission grid and encouraging a series of events which will naturally follow. As the transition occurs, the benefits resulting from greater efficiency will increase. Ultimately, the generation sector of the industry may be devolved, and independent providers of power would then supply electricity to transmission and distribution utilities.

The NOI raises a number of pricing issues for economy and reliability transactions. The general position of the ICC is that, where competition is present, FERC should not provide explicit rules for pricing coordination transactions but rather should merely obtain reasonable assurance that the transaction is at arm's length. A rebuttable presumption of competition should be made where the selling utility has extended the option to wheel power on a nondiscriminatory basis. This presumption would create a situation in which the buyer would have the same access to other producers as the seller. By the same token, the pricing of reliability service should be flexible where nondiscriminatory access is provided. The great appeal of open

access is that the specific pricing terms need not concern the regulator. Competitive alternatives assure that the terms are not discriminatory.

The ICC views open access to transmission as a vital element in increasing efficiency under the current market structure and an integral part of the devolved electric generation market of the future. The short-term benefits of access include a better use of existing capacity, inasmuch as utilities now forced to operate plants with high marginal cost would be better able to purchase energy from other producers with lower marginal costs. A system of required wheeling would provide the local utility with the assurance of access to markets. The assurance of access to transmission would provide long-term benefits by encouraging more cost effective investments to be made in both generation plant and transmission capability. Utilities needing additional electricity could either buy additional power or build an efficiently sized plant and sell excess electricity. Access to markets would also make major long-distance, high-voltage transmission projects more feasible and less risky.

For competition to exist effectively in the wholesale market for electricity, a utility must be restricted from using its control over required transmission service to exert monopoly power to affect wholesale market transactions. Transmission access may be accomplished by making it a requirement for allowing the flexible pricing of economy energy. Such a requirement would not be a requirement to wheel, but rather a recognition that the agreement to provide wheeling is a necessary condition to ensure that a transaction in the economy energy market is competitive. It is that competition which eliminates the need for FERC to oversee wholesale rates actively.

A second method of assuring access would be simply to have FERC require wheeling by utilities. This option is probably beyond FERC's current authority under §211 and §212 of the Federal Power Act. However, if FERC finds that mandatory wheeling provides the potential for widespread benefits, as we believe it does, FERC has an obligation to inform Congress of that fact and to ask for legislation which would provide it with the required authority.

The Illinois Commerce Commission believes that the delegation of authority to FERC to require wheeling would be highly beneficial. This legislatively granted authority would clearly be more effective than relying on the voluntary decision of a utility to provide wheeling. The benefits of open access to transmission suggest a two-pronged strategy. FERC should encourage voluntary wheeling now, since it has the power to do this without new legislation. FERC should also present evidence to Congress and request the authority to order mandatory wheeling.

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	i
TABLE OF CONTENTS	v
I. INTRODUCTION	1
II. THE ROLE OF COMPETITION IN THE ELECTRIC POWER INDUSTRY	2
A. The Role of Regulation	2
B. The Path to a Competitive Generation Market	4
C. Access to Transmission Services	4
D. Efficiency Gains from Wheeling	5
E. Extension of Competition Through Broader Access to Transmission	6
F. Diversity and Devolution of Supply	7
G. Development of Sophisticated Contracting Markets	9
III. COORDINATION TRANSACTIONS	10
A. Pricing	10
B. Distribution of Gains	14
IV. TRANSMISSION	18
V. CONCLUSION	22

I. INTRODUCTION

The Federal Energy Regulatory Commission (FERC) in Docket RM85-17-000 is evaluating its present policies governing wholesale electricity transactions and transmission service. FERC's stated objectives are to determine whether its policies promote, or whether they impede, efficiencies in electricity markets and to evaluate alternative policies. The notice of inquiry is in two phases. Phase I (NOI-I) addressed here was issued May 30, 1985, and considers coordination transactions and transmission service. Phase II was issued June 28, 1985, and considers requirements service.

The Illinois Commerce Commission (ICC) is the state governmental body which regulates retail electric sales within Illinois. The ICC welcomes this investigation into methods of improving efficiency in the wholesale market and believes that such improvements would result in lower rates to retail customers.

The ICC believes that greater reliance on competitive forces, where appropriate, is crucial to improving efficiency and to extending the benefits of that improved efficiency to consumers. Critical to the successful use of competitive forces is the creation of an environment which is conducive to competition. The generation sector of the electric power industry has the potential to be competitive. However, a key element in an effectively competitive market is a sufficient number of buyers and sellers. In the electric industry these buyers and sellers would receive access to the wholesale market through the willingness of, or requirement for, a utility to wheel (transmit) power across its transmission system on a nondiscriminatory basis. This access would allow other entities to transact sales and purchases of power. Access would foster the competitive market environment necessary to the effective use of flexible pricing schemes considered in this NOI.

The parallels to the natural gas industry are too compelling to disregard. The Natural Gas Policy Act of 1978 set in motion the deregulation of natural gas at the wellhead. However, the benefits of competition at the wellhead were largely foreclosed to natural gas pipeline customers because pipelines were able to provide transportation of gas on a discriminatory

basis. FERC proposed rules on May 30, 1985 in docket RM85-1-000 which would encourage open access to gas transportation. Just as FERC recognized the importance of access to transportation in the natural gas industry, it should also recognize the importance of transportation (transmission) to an efficient electric industry. FERC should encourage wheeling and also ask Congress for broader powers to require wheeling.

In Section II of these comments the Illinois Commerce Commission describes the potential for competition in the electric industry and the necessary steps to achieve its benefits. In Section III, the appropriate policies for coordination transactions are considered. Section IV discusses issues related to wheeling, and Section V provides concluding remarks.

II. THE ROLE OF COMPETITION IN THE ELECTRIC POWER INDUSTRY

Regulation can be viewed as a substitute for a competitive market where competition is not viable. Competitive markets offer a number of benefits which are less effectively produced when the regulator is the controlling force in a market. Some of these benefits include:

- o Efficiency in production.
- o Proper economic signals for investment decisions.
- o Prices which accurately reflect the true costs of a product or service.
- o Allocating output to its highest valued uses.
- o Protection of both the buyer and seller from exploitation and discrimination by other economic agents.

A. The Role of Regulation

Regulation can be viewed as a substitute for competitive markets where those markets are not viable. Regulation of a market may be needed where monopoly power by a seller prevents competition. This is likely where economies of scale make it cheaper for one seller to provide a product or service than it would be for a greater number of sellers to do so. While transmission

and local distribution systems may exhibit the characteristics of natural monopoly, generation does not.

While regulation may be a substitute for a competitive market where competition is not viable, regulation is not a perfect substitute for it. Regulation tends to be inflexible and slow to react to change. FERC recognizes this shortcoming, stating:

> And, where electricity markets are competitive, utilities and their customers can benefit from the flexibility to respond to market forces. Competition can be a valuable complement to regulation. Traditional regulation is essentially reactive. Its success can be questionable during times of changing industry conditions. Competition, on the other hand, encourages firms to make efficient decisions with a minimum of regulatory intervention. Regulation should allow utilities to respond to market condition, where possible, in a manner consistent with the public interest. (NOI-I, p. 2)

In its concurrent investigation of the gas industry, FERC has also recognized that competition can better protect customers than can the regulatory process.

> In those areas where viable competition exists or could exist, general regulatory principles that foster such competition are likely to offer greater protection of purchasers than an individually adjudicative-type procedure. (Notice of Proposed Rulemaking in Docket RM85-1-000, May 30, 1985, p. 24).

Given the inherent shortcomings of regulation, the optimal regulatory policy must be to rely on competition where it is viable and to limit regulation to those areas where it is not viable.

B. The Path to a Competitive Generation Market

It is the view of the Illinois Commerce Commission that substantial benefits may be obtained through moving toward a more competitive market for electricity generation. It is clear that the current situation of higher prices in the face of abundant generation capacity is inconsistent with the behavior of a competitive market. Prices have not responded to changes in supply and demand. Consumers receive price signals that indicate scarcity at a time when supplies are more than adequate; conversely, prices are held down by regulation in periods of shortage, exacerbating the shortage. Competition in the generation sector of the industry would improve the price signals given to customers. The role of the regulator should be limited to protecting consumers from the monopolistic power of the local distributor, while capacity additions, generation practices, reliability levels, and wholesale prices would all be policed by a much stricter guardian - the competitive marketplace.

Regulation has evolved over a number of years, and careful consideration must be given to a transition to greater reliance on competition. The very issuance of the NOI shows a recognition of the importance of a careful consideration of the transition by FERC. The industry can, however, be smoothly transformed into a competitive, market-oriented industry by providing access to the transmission grid and encouraging a series of events which will naturally follow. As the transition occurs, the benefits resulting from greater efficiency will increase. Ultimately, the generation sector of the industry may be devolved, and independent providers of power would then supply electricity to transmission and distribution utilities. This transition is described below.

C. Access to Transmission Services

For competition to exist effectively in the wholesale market for electricity, a utility must be restricted from using its control over required transmission service to exert monopoly power over wholesale market transactions. FERC also realizes the importance of wheeling, stating,

"Availability of transmission services is a necessary element to competitive electricity markets." (NOI-I, p. 17) Transmission access may be accomplished by making it a requirement for allowing the flexible pricing of economy energy. Such a requirement would not be a requirement to wheel, but rather a recognition that the agreement to provide wheeling is a necessary condition to ensure that a transaction in the economy energy market is competitive. It is that competition which eliminates the need for FERC to oversee these wholesale rates actively.

A second method of assuring access would be simply to have FERC require wheeling by utilities. This option is probably beyond FERC's current authority under §211 and §212 of the Federal Power Act. However, if FERC finds that mandatory wheeling provides the potential for widespread benefits, as we believe it does, FERC has an obligation to inform Congress of that fact and to ask for legislation which would provide it with the required authority.

The Illinois Commerce Commission believes that the delegation of authority to FERC to require wheeling would be highly beneficial. This legislatively granted authority would clearly be more effective than relying on the voluntary decision of a utility to provide wheeling. The benefits of open access to transmission suggest a two-pronged strategy. FERC should encourage voluntary wheeling now, since it has the power to do this without new legislation. FERC should also present evidence to Congress and request the authority to order mandatory wheeling.

D. Efficiency Gains from Wheeling

Access to transmission increases the potential use of central dispatch as well as power brokerage and auction markets, encouraging more efficient use of generation capacity.

Under central dispatch, utilities in a state or region join together and commit their generating facilities to be operated from a single control facility. Central dispatch ranks (and commits to production) generating units in the most efficient manner, without regard to company ownership. For example, by considering an entire region's generation capability as if it were

a single utility serving the region, central dispatch serves the region's load at the least possible cost. Furthermore, central dispatch provides market-like incentives by rewarding efficient plants (and plant owners) with high utilization rates and by penalizing inefficient plants by limiting their output to only those periods of very high demand. Centralized dispatch also represents a step toward market-based dispatch.

Access to transportation also facilitates brokerage and auction markets for power. In a brokerage or auction market, voluntary buy/sell agreements between companies would occur on an hourly or longer basis, allowing the most efficient generating units to be relied upon most heavily. Computers would provide the information necessary to make a complex power market feasible. Brokerage/auction markets would represent a significant step toward competition in the electric utility industry and would be a substantial break from the past. The creation of a computerized auction market would represent a move away from rate-base pricing toward market pricing. A brokerage/auction system through a "market" dispatch (as opposed to the traditional design of regional central dispatch operations) would involve many buyers and sellers and would go a long way toward bringing the benefits of competition to electricity consumers.

E. Extension of Competition Through Broader Access to Transmission

The critical requirement for the development of a competitive market is the ability of producers of electricity to have their product delivered to consumers. Access is provided by the ability to "wheel," or transport, electricity through the integrated transmission system. Traditionally, such interchanges have been between electric utilities. However, wheeling could be extended to independent producers and individual consumers. Such an extension would further expand the scope of competition and strengthen the competitive market for electricity.

A main benefit of broad-based wheeling is that consumers are no longer limited to a single supplier for their electric power needs. Most customers are now limited to purchasing electricity from the electric utility serving their area. Under a framework which facilitates the transportation of

designated generation output to specific customers, arbitrary geographical differences in prices would be eliminated. Consequently, the assurance of transportation for producers and consumers would guarantee the development of a broad competitive market for electrical power, thereby forcing market-based pricing across regions and supplanting the reliance on rate-of-return regulation for the generation function which characterizes the current regulatory structure.

A full wheeling system would include the following types of transport:

- o utility to utility;
- o utility to a specific customer in another utility's territory;
- o non-utility electric power producer to a utility in another area; and
- o non-utility electric power producer to a specific customer.

It might be thought (from a traditional utility regulation standpoint) that allowing wheeling to specific customers within a utility's territory would result in higher prices for the remaining customers since it leaves the undiminished rate base to be covered by a smaller customer base. However, if the local utility is rate-base regulated for its distribution and transmission system (because as the only available transporter of power, it is a monopoly) but is required to rely on market pricing for its generating capacity, there would be no problem for the other customers. In fact, the intrusion of lower priced electricity into the area would force the local utility either to lower its own prices or forego the opportunity to sell its own electrical power.

F. Diversity and Devolution of Supply

Wheeling, central dispatch, and brokerage markets provide important first steps for the evolution to full competition in the generation sector and the

extension of its benefits to all consumers of electricity. To have full competitive markets, however, additional conditions should be encouraged.

The first is the development of true diversity of supply. From both a technological and economic standpoint there is certainly no reason to prevent electricity from entering a utility's system from a diversity of sources. A broad range of technologies for cogeneration and small power production, as well as generation from other utilities, provide the potential for a highly diversified generation base.

Currently, cogenerators and small power producers are limited by the existing monopoly transmission system which effectively permits only one buyer -- the local electric utility -- to purchase a producer's output. While the utility is obligated to purchase the electricity produced by cogeneration, the price is set at the utility's avoided cost (which during an era of sufficient supply is quite low). Over the longer run, diversity of supply could better develop, given a situation that allowed non-utility suppliers using the wheeling option to sell electricity to both direct customers and/or utilities at negotiated market prices rather than at prices created by legislative or regulatory bodies.

A system which allows full diversity of supply could also result in the addition of electric generating capacity in relatively small increments as independent suppliers perceive increased demand. This would help alleviate the problems of temporary surpluses of capacity which occur when large discrete amounts of generating capacity are added by a utility.

The second condition is devolution -- the movement of utility-owned generating capacity from rate-base regulation to competitive status. Devolution could take a number of forms. All, or portions of, existing rate-based generating capacity could be designated as "devolved." That capacity, with regulatory approval, could then be placed in a holding company subsidiary that would earn its return on investment through its ability to market the electricity it produces. Alternatively, existing utility capacity could be removed from rate base and partially or completely sold. New additions to capacity either developed by a utility, a group of utilities, or

through agreements between a utility and non-utility producers could be constructed on an unregulated basis. Devolution would also strengthen the competitive market for power generation by preventing the extension of the distribution company's monopoly power to generation and by increasing the diversity of supply.

G. Development of Sophisticated Contractual Markets

Rather than have electricity sold on a tariffed basis, a devolved generation market would readily provide for individualized, competitive contracts. For instance, in addition to firm electricity service, a customer might purchase widely varying volumes of electricity without a concomitant obligation on the generator to stand ready to serve such loads in the future. In concept, similar service is currently available through "interruptible" rates which allow utilities to curtail service under certain conditions. The contracting approach is more general and would both provide greater flexibility and promote the aggressive marketing of capacity.

A devolved generation sector with access to the transmission grid could be expected to foster sophisticated spot and futures markets. Each satisfies a separate need in the efficient supply of electric power and each is a natural outgrowth of the environment created by the evolutionary steps previously described. A spot market would allow consumers, either individually or represented by their distribution utility, to purchase electricity at market clearing prices. Futures markets would provide a market valuation of future capacity and supply conditions. With the alternative of purchasing future capacity at known market rates, a utility could better evaluate and adopt a least cost strategy to meet future needs, and generators could better plan their own system expansion. Furthermore, companies would be able to "size" expansions more efficiently since a futures market would allow them an opportunity to market future capacity surpluses.

The development of these markets not only has the potential to improve information about supply and demand but also to provide additional intertemporal sources of both. By expanding the market for producers and consumers alike, artificial barriers of time and company boundaries are eroded. The

discipline of a competitive market to require the most efficient utilization of generating capacity at the lowest cost to consumers is unavailable under traditional regulation. In addition to providing the benefits inherent in open access to transmission, it is the key to starting a restructuring of the industry.

III. COORDINATION TRANSACTIONS

The previous section described the benefits of open access to transmission as well as the benefits of a more competitive generation market. In this section the pricing and the distribution of gains from coordination sales are considered. With a fully devolved generating sector, of course, these questions become largely moot because markets would set prices and determine the distribution of gains. However, the recommendations in this response do not depend on devolution, and the handling of coordination transactions remains an important issue.

A. Pricing

The NOI raises a number of pricing issues. The general position of the ICC is that, where competition is present, FERC should not provide explicit rules for pricing coordination transactions but rather should merely obtain reasonable assurance that the transactions are at arm's length. A rebuttable presumption of competition should be made when the selling utility has extended the option to wheel power on a non-discriminatory basis. This presumption would create a situation in which the buyer would have the same access to other producers as the seller. By the same token, pricing of reliability service should be flexible where nondiscriminatory access is provided. The great appeal of open access is that the specific pricing terms need not concern the regulator. Competitive alternatives assure that the terms are not discriminatory. From this perspective, the ICC addresses FERC's specific questions.

1. What factors should guide the Commission in evaluating its regulation of coordination services?

The key factor should be the competitiveness of the market as evidenced by the seller's willingness to provide access to transmission. If legislation were enacted requiring wheeling or enabling FERC to order it, this willingness would not be needed.

4. Should the Commission continue the current pricing practices for coordination sales? Why? Do they result in an efficient allocation of capacity and energy among potential buyers? Do they result in an equitable distribution of gains among buyers and sellers?

Given buyer access to wheeling, FERC need not concern itself with particular rules. For example, a split-the-savings rule might result in a competitive market because it allows for certainty and reduces costly bargaining. Alternatives other than a 50-50 split may develop to reflect the risk on the two sides of the market more accurately. Another alternative could be a single market price based on a brokerage system. By providing the basis for a competitive market through access, the exact structure will be determined in the market. The pressures of the market place will ensure efficient pricing practices and equitable treatment of buyers and sellers.

5. Should the Commission consider setting price zones that are based on regional costs rather than company-specific costs?

The setting of price zones is not needed with open access. If open access is not provided, zones based on regional costs could foreclose transactions which improve efficiency. For example, two utilities could have differing incremental costs at a particular time which are outside the regional zone. They would be prevented from pursuing a transaction which would benefit both.

6. How competitive are coordination markets? Are some coordination markets more competitive than others? What standards and procedures would allow the Commission to assess the competitiveness of a particular coordination market? How should the Commission account for changes in market conditions over time? What problems are being encountered that inhibit competitive coordination markets? Is transmission access a problem? Is the information exchanged among utilities adequate for markets to be competitive?

Any coordination market which has open access to transmission is sufficiently competitive to allow FERC to forebear regulation. The competitiveness of coordination markets without access requirements would differ on the basis of number and size of sellers in geographical proximity to a given buyer as well as the availability of transmission. The declaration of a standard for competitiveness would be inherently arbitrary, subject to change, and therefore unworkable. The rebuttable presumption of competitiveness which would be provided by a seller utility being ready to wheel is a much more practical alternative than an abstract determination by FERC of whether the market is competitive.

While transmission access is a problem to utilities, it is a much greater problem for non-utility producers and for end users. As the competitive market for power develops, extension of wheeling rights to these economic agents should occur.

7. Should the Commission approve wider price zones for sales that are made in competitive coordination markets? For example, should the Commission give wider zones to utilities that voluntarily agree to provide transmission service to other potential sellers of the same coordination service? Would wider zones better allocate services among potential buyers and gains among buyers and sellers than the present standards?

FERC should allow markets to set prices where the markets are competitive. There is no need to set a zone under such circumstances. The establishment of zones would not provide any benefit but would reduce realized gains. As a result, sellers offering to wheel for other sellers should be allowed full flexibility in terms of sales transactions rather than wider zones.

8. For coordination sales that occur in competitive markets, should the buyer's decremental cost serve as the price ceiling? Please explain. Would allowing such a price ceiling in competitive markets allow prices to better allocate capacity and energy among potential buyers and the gains of trade among buyers and sellers than the current price ceiling standards?

In competitive markets, a wider zone would be preferable to a narrower zone, but the critical point is that the zone is not needed

under such circumstances. Establishing a zone would result in needless regulatory costs.

9. Should the buyer's decremental cost serve as the price ceiling regardless of the competitiveness of the market? Please explain. Would the allocation of capacity among potential buyers be less efficient than if competitive market conditions were required for such a price ceiling? Would the allocation of benefits among buyers and sellers be less equitable than under competitive market conditions?

If competitive circumstances do not prevail (i.e., open access to transmission), the use of the buyer's decremental cost as a ceiling would be undesirable. While the seller with monopoly power would still want to make transactions where incremental cost differences prevail, the terms of sale clearly would result in inequitable treatment of the buyer. The potential for the seller to use its monopoly power by refusing profitable transactions in order to force better terms in the future also exists and may reduce the volume of transactions. As a result, current procedures may be preferable under these circumstances.

10. Should the same price ceiling standards be used for both economy and reliability transactions? If not, what distinctions in standards should be made between the two types of trades? Will a distinction create inefficiencies or distortions in electricity markets?

Where competition is present, there is no need for pricing standards. Where competition is not present, basing maximum reliability reservation charges on annualized cost of generating units expected to provide the service is perhaps the second best alternative to free pricing with competition. With reliability energy priced in this manner the result should be the least inefficiency in the absence of a competitive market.

12. What function is performed by reservation charges? What factors are considered in setting reservation charges? Have there been instances where a coordination service was interrupted or curtailed to a customer that had paid a reservation charge? Please describe.

Reservation charges provide an incentive to the seller to have needed capacity available as well as insurance to the buyer. The ability to know terms in advance is useful and should not be proscribed by FERC.

Under competition, reservation charges, if economically justified, would be determined by the market. In the absence of competition, the range of capacity reservation charge should be from zero to the annualized cost of the capacity reserved.

13. The Commission would like commentors to consider having all coordination services sold in a spot market. Instead of two part rates that include a reservation charge, one part rates would be used. This rate would vary so as to clear the market in relatively short periods. Please comment on this method. Would it enhance efficiency compared to the use of reservation charges?

This procedure is inefficient as it would prevent willing buyers and sellers in a competitive market from reaching preferred contracts.

14. Giving coordination service sellers wider pricing flexibility could lead to price discrimination in that sellers could charge different prices for the same service to different customers. Under what circumstances will pricing flexibility lead to price discrimination? Is such price discrimination undesirable? Are there circumstances when price discrimination can lead to improvements in economic efficiency otherwise be beneficial?

Pricing flexibility should be allowed only where the seller offers to wheel. Under such circumstances price differences can be attributed to cost differences and to the haggling of a competitive market and should not be considered discriminatory.

B. Distribution of Gains

To answer the question of how gains from coordination transactions should be distributed between a utility's shareholders and its requirements customers, it is useful to compare the way gains are now distributed with the way they would be distributed with a devolved (independent) generation sector. This accomplishes two objectives. First, it is our view that the future of the industry lies in devolution; thus it is important to study the distribution of gains under these circumstances. Second, and more relevant to the discussion here, it suggests how a competitive market might allocate the risks and gains and provides some guidelines for structuring rewards under the current industry structure.

1. Current Practices for Coordination Sales and Purchases.

The current procedure for distributing the gains of coordination transactions differs for sales and purchases. For sales, a projected gain or profit is credited to revenue requirements for the benefit of requirements customers. While the utility is at risk for this amount, it retains all gains from these sales. There is full marginal retention of each dollar of gain, just as there would be for a competitive seller. While FERC does not require a payback of gains in excess of those projected, it is likely that projections are based at least partially on historical gains. Thus, larger than projected gains would likely result in higher projections for future periods. In the long run, the gains tend to be transferred to customers through this procedure.

It is instructive that FERC notes the difficulty of challenging utility forecasts of gains from sales (NOI-I, p. 14). While it is difficult to challenge a company's numbers based on a particular case, it is clear that FERC could ex poste compare the projections of both the company and staff with actual gains. A study of this sort for a large number of companies over a twenty-year period would certainly strengthen the staff's ability to challenge a company's projections. FERC is in the best position to make such a study. The ICC urges FERC to provide this study (identifying companies by name) and to make it available for use by states in setting gain projections for state jurisdictional purposes.

Purchases of economy energy are flowed to customers through the fuel adjustment clause (FAC). To the extent that the economy purchases are cheaper than generation by the purchasing utility, these gains flow to the customers via a lower FAC. The benefit to the buying utility comes indirectly through lower costs increasing the demand for its services. Long-run purchase expenses are included in base rates so that overestimates of these expenses result in profits to the utility. FERC asks for comments on the nature and extent of this potential conflict (NOI-I, p. 15). The ICC is also interested in this question and suggests that FERC study actual and projected long-term purchases as suggested above for gains from sales.

2. Coordination Sales and Purchases in a Devolved Market for Generation.

In a devolved generation market, sellers would retain all gains from transactions (the difference between the revenue and the variable cost of generating that electricity). For each dollar saved from producing that energy more efficiently, the gain to the seller increases correspondingly. The seller thus has incentives to minimize the cost of production. This gain is not, however, necessarily an economic profit. The gain goes toward covering the generator's risk and other fixed costs. It is only if the total gain exceeds these costs that economic profits are made. Economic profits are both a reward for superior performance and a signal for investment and entry into the market. The resulting investment and entry increases supply and ensures that only superior performance will result in continued profits. The benefits of innovation by the seller are transferred over time to consumers as these new entrants increase supply and thereby reduce prices and profits. In the case of this market, the lower prices to the purchasing distribution company would be flowed to the end-user through the FAC.

Purchases of economy energy with a devolved generation sector would be handled as they are at present with the utility flowing the costs through the FAC. The customers gain immediately through the lower FAC. In a fully devolved industry, the utility would not generate electricity at all; thus the FAC would consist only of electricity purchase transactions. Since the utility does not take the risk of the plant to generate the electricity, the utility would not share in the gain. A purchase of electricity would be treated the same way that a purchase of coal is now handled. By limiting the business of the utility to transmission and distribution, the risk of the utility would decrease. The danger of poor investment decisions resulting in regulated prices which make electricity unmarketable is eliminated. The independent producer would take the risk of the investment decision.

This discussion of the current treatment of gains and the way that they would be handled under a devolved market suggests that current procedures are generally consistent with a devolved market and therefore appropriate. In

this context, the specific questions on the distribution of gains can be addressed.

16. What are the positive and negative aspects of the Commission's present practices concerning the distribution of coordination transaction benefits? How do they affect the incentives to buy and sell coordination service? What risks, if any, do utilities incur in making coordination sales and purchases? Do the Commission's present practices result in a distribution of benefits between requirements customers and stockholders that is consistent with risk incurrence? Please explain the basis of your answer.

As discussed above, current practices are appropriate. Utilities take risks in selling power in the coordination market to the extent of their projected gains. However, independent sellers would take similar levels of risk. Coordination power purchasers take little risk and gain a correspondingly smaller reward.

17. Should the Commission establish a specific distribution of coordination trade benefits between stockholders and requirements customers? Please explain. If the answer is yes, what distribution do you suggest? How would this distribution affect requirements customer rates? What mechanism would best facilitate the suggested distribution? Would the FAC be an appropriate mechanism? Please explain.

Present distribution of the benefits is adequate, but the structure of the industry is not. A more competitive structure would create more incentives and greater benefits.

18. Does lowering requirements customer rates and meeting least-cost regulatory scrutiny provide sufficient incentive for utilities to maximize the benefits to be gained from coordination transactions?

All benefits are not being achieved; better coordination would create greater benefits. A study by ICC staff estimated increased benefits in the range of 37 to 57 million dollars annually from improved coordination for the four major Illinois utilities alone.[1]

---

[1]Katherine Burbridge and Steven Hickey, "A Study of the Dispatch of Electric Generating Units in Illinois," Illinois Commerce Commission Staff Monograph Series, March, 1985, p. 26.

19. Should the distribution of benefits be the same for all types of coordination transactions? For example, should purchases be treated differently than sales? Should different types of sales be treated differently? Should different types of purchases be treated differently?

Since sales involve the use of plant paid for by requirements customers while purchases do not involve the use of that capacity for the benefit of others, the difference in treatment between purchases and sales is justified.

IV. TRANSMISSION

The ICC views open access to transmission as a vital element in increasing efficiency under the current market structure and an integral part of the devolved electric generation market of the future. This access would provide both short-term and long-term benefits. The short-term benefits include a better use of existing capacity, inasmuch as utilities now forced to operate plants with high marginal cost would be better able to purchase energy from other producers with lower marginal costs. These exchanges would reduce the total cost of generating electricity. While the focus of this inquiry is primarily on short-term exchanges, it is important to note that access to transmission can have very important long-term investment implications. A system of required wheeling would provide the local utility with the assurance of access to markets. This assurance would allow more cost effective investments to be made in both generation plant and transmission capability. Utilities needing additional electricity could either buy additional power or build an efficiently sized plant and sell the excess electricity. Access to markets would make major long-distance, high-voltage transmission projects more feasible and less risky.

The present transmission system is inadequate to provide the full range of long-term benefits. The transmission grid has been developed for purposes of reliability and serving native load. As a result, long-distance, high-voltage transmission lines which could provide for major movements of power between ample and deficient capacity regions are not as developed as they should be. The problem is analogous to designing a gas pipeline between a gas field in Kansas and St. Louis without any consideration for the use of

the pipeline to provide transportation of gas to points farther east. When local utilities cannot expect to obtain wheeling services, they are forced into the prospect of meeting needs for additional power with inappropriately sized plants. The choice is often between a small plant with higher unit costs or a larger plant with lower unit costs for which the utility's market provides inadequate demand. In either case, the result is higher than necessary costs to the utility's customers. Open access to transmission would provide the power markets necessary to allow a utility the better options of either buying power in lieu of capacity expansion or building an efficiently sized plant and selling the excess power until it is needed by the utility's customers.

From this perspective, the ICC offers comments on FERC's specific questions on transmission.

21. Is the demand for transmission services being met? If not, why?

Lack of access to transmission has both reduced the gains from coordination and resulted in a transmission system not fully able to take advantage of regional differences in availability of generation capacity. Both factors raise costs to electricity consumers.

22. Does the Commission's regulation impede voluntary transmission arrangements? How? What can the Commission do to promote more voluntary transmission arrangements?

The denial of access which is allowed by FERC does reduce efficiency in the generation of electricity. As discussed in Section II above, the ICC suggests that a utility be encouraged to wheel by allowing freedom in the pricing of coordination and reliability sales. FERC should also request authority to require wheeling.

23. How should transmission services be priced. Should transmission services be priced according to their degree of firmness? How can this be accomplished?

Transmission sales should be priced according to incremental costs. However, it may also be appropriate to employ a reservation charge for transmission capacity if it is desired on a firm basis. That reservation

charge could be flexible with a maximum based on the embedded cost of the transmission system or the particular part of it being used if there are no plans to expand the transmission system to meet the transmission customer's needs. If expansion is needed to meet the customer's needs, the embedded cost of the new investment would be the appropriate maximum standard for the reservation charge.

24. Are there efficiency reasons for requiring cost-based rates for transmission service for purely economy transactions? If cost-based rates were not required for such transactions, could a transmission agent set a price that would preclude some otherwise efficient trades? Please describe the conditions under which this could happen.

The method of setting transmission rates is important and not simply a matter of sharing the gains from coordination sales. Basing the transmission charge on embedded costs rather than marginal costs could reduce regional efficiency. It would do so by creating incentives for the wrong producers to provide coordination energy.[2] It is therefore necessary to limit not only the rate flexibility in charging for the monopoly transmission service but also to have those rates set at marginal cost and not embedded cost.

---

[2]A simple hypothetical example will illustrate this point. Assume there are three utilities, A, B, and C, with marginal generation costs of 4.5, 4.2, and 6.0 cents respectively. A and C are connected only through B, which has a wheeling rate of 1 cent based on embedded costs. B's marginal wheeling cost is assumed to be zero. The current pricing rule splitting the savings is in effect for coordination sales.

Under the above assumptions the maximum efficiency gain of 1.8 cents would occur if B produced energy for C. However, under the assumptions here, A would produce the electricity for C. The reason is that B is better off not selling to C and earning a gain of 0.9 cents per kwh (½ of the 1.8 cent total saving from a transaction between B and C). B would be able to offer to transmit power between A and C and to earn 1.0 cents per kwh (with A and C splitting the 0.5 cents remaining gain from A to C transaction). The result in this example is a gain in efficiency from coordination of only 1.5 cents rather than the possible gain of 1.8 cents. Note, predicating flexible pricing on a requirement to wheel at marginal costs (zero in this case) would result in a competitive price of 4.5 cents, with the correct company (B) providing the power.

25. Please comment on the desirability of allowing excess transmission capacity to be sold or auctioned to the highest bidder. How would such auctions affect the efficiency with which electricity is produced and transmitted? Would auctions lead to an undesirable redistribution of income between utilities? How would auctions affect the wholesale customer rates of the buyer and seller of transmission capacity?

While auctioning off transmission capacity could limit the short run monopoly power of a transmitting utility, the complexity of the transmission system may make the specification of exactly what is being bid for difficult. There is also the possibility that the number of bidders may be so small that a competitive auction is not possible. A long run problem also exists in this case in that the utility providing wheeling would have an incentive not to add wheeling capacity in order to drive up the bids for wheeling to the monopoly price.

26. Consider the following hypothetical. Utility A, a low-cost generator, wants to sell energy to Utility C, a high-cost generator. The transaction must be transmitted across the system of Utility B, whose generation costs fall between A's and C's. but Utility B refused to transmit the energy and, instead, insists on buying the energy from A and reselling it to C at a mark-up. Does Utility B's behavior result in any efficiency losses? Please explain. If there are not efficiency losses, are there any negative aspects to B's behavior? How common is such behavior in actual practice?

There are no efficiency losses in this example. However, this behavior may provide a method of exploiting a transmission monopoly and, in effect, charging above the authorized rate for wheeling.

27. Consider another hypothetical. A wholesale requirements customer of utility O wants to shift its load to Utility P because P has lower average cost rates. Utility O would have to transmit the power from P to the customer. Assume that both utilities (O and P) are either members of the same centrally dispatched power pool or they closely coordinate their generation resources with each other such that the generation dispatch is not affected by the load shift. Are any efficiency gains accomplished by Utility O providing the transmission service? Please describe any positive or negative effects associated with the transmission service.

There may be some efficiency gains in the long run by providing utility O with a greater incentive to build efficient plants.

28. Under what circumstances would expanded access to transmission services not be desirable?

It is the position of the ICC that the goal should be unrestricted access to transmission. Such access should be provided to both independent producers and end-use customers. However, given that FERC authority is currently limited by law, open access may have to be limited to utilities until such time as FERC is given additional authority. The ICC believes FERC should ask Congress for authority to require unrestricted open access to transmission.

30. Do our pricing policies create any disincentives to transmission investment? What can the Commission do to encourage proper transmission investment?

As discussed above, lack of access to other customers through wheeling makes it less desirable to build transmission lines between utilities. The reason for this is that the markets for which those lines might be used can be foreclosed by another utility refusing to wheel. Clearly, encouragement to utilities to provide wheeling would encourage competitive levels of transmission investment.

V. CONCLUSION

The Illinois Commerce Commission believes the present inquiry into wholesale electricity transactions and transmission services is both timely and constructive. It is timely in that differences in costs and capacity availability provide the potential for substantial increases in efficiency in the production of electricity. It is constructive in that FERC is wisely considering making greater use of market forces.

This inquiry is concurrent with an inquiry on natural gas regulation (Docket RM85-1-000). Proposed rules resulting from that inquiry provide for increased reliance on market forces to ensure good performance in that industry. The ICC submitted comments in that inquiry which strongly supported such an approach.

The ICC firmly believes that greater competition in the electric industry also provides the promise of substantial benefit to the nation. Given the access to markets provided by the access to transmission, we believe that an independent competitive generation sector will evolve. This will provide for greater efficiency in production, appropriate signals for investment, prices which reflect true economic costs, and protection against discriminatory behavior. It must be emphasized, however, that greater efficiency through nondiscriminatory access is not dependent on the development of an independent generation sector. Under the present industry structure, access would enable better coordination of generation, greater efficiency, and lower costs to consumers.

FERC should encourage wholesale electricity transactions through the encouragement of nondiscriminatory access to transmission services. Just as access to the pipeline transportation system is the key to extending the benefits of a competitive wellhead market to consumers, nondiscriminatory access to the electric transmission system is the key to extending the potential benefits of a competitive market for generation. It is critical that FERC encourage this access.

FERC may encourage nondiscriminatory access under its present authority by allowing utilities which offer this access freedom in pricing coordination sales. This freedom can be justified by the fact that when access is offered, competitive forces will ensure that prices for coordination sales are just and reasonable.

Given the potential benefits of a competitive generation market, FERC should not be content only to encourage wheeling under its current authority. FERC should actively pursue before Congress additional authority to require wheeling. This authority would prevent the thwarting of the benefits of the competitive generation market by utilities wishing to forestall transactions which require wheeling. FERC is the federal agency with the responsibility for ensuring good performance in the electric industry. As such, the ICC believes that FERC has the obligation to seek such authority for the benefit of the nation's electric users.

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Regulation of Electricity Sales-for-Resale and Transmission Services	)))	Docket No. RM85-17-000 (Phase II)

COMMENTS OF THE

ILLINOIS COMMERCE COMMISSION

Joseph H. Golec
Financial Economist - Energy Program
Policy Analysis & Research Division

Dr. Thomas E. Kennedy
Director - Energy Program
Policy Analysis & Research Division

September 18, 1985

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission (FERC) in Docket RM85-17-000 is evaluating its present policies governing wholesale electricity transactions and transmission service. FERC's stated objectives are to determine whether its policies promote, or whether they impede, efficiencies in electricity markets and to evaluate alternative policies. The Notice of Inquiry is in two phases. Phase I (NOI-I) was issued May 30, 1985, and considered coordination transactions and transmission service. Phase II, addressed here, was issued June 28, 1985, and considers requirements service.

The Illinois Commerce Commission (ICC) believes that greater reliance on competitive forces in the electricity industry where appropriate is crucial to improving its efficiency and to extending the benefits of that improved efficiency to consumers. Requirements and coordination transactions are appropriate areas for competition. Critical to the successful use of competitive forces is the creation of an environment which is conducive to competition. The generation sector of the electric power industry has the potential to be competitive. However, a key element in an effectively competitive market is a sufficient number of buyers and sellers. Open access to wheeling services provides this key element.

Access to wheeling serves a similar function for both long-term requirements contracts and short-term coordination contracts: it increases the number of potential buyers and sellers. Requirements customers may especially benefit because of the long-term nature of their contracts. Given the capital intensity of electricity production and the long lives of the plant and equipment, more suppliers may be encouraged to enter the market if more assurance of demand is available. Long-term requirements contracts increase the number of potential suppliers and strengthen competition. This process is stymied if access to wheeling is not guaranteed.

The focus of these comments by the ICC is on pricing policy. The ICC believes that requirements customers, given unrestricted access to transmission facilities, are sophisticated enough to use competitive forces to help reduce the prices they pay for electricity. More important, their behavior is

likely to induce lower production costs which can reduce the price all consumers pay for electricity. Unrestricted competition in the market for requirements services can be a first step toward a fully competitive market for electricity. If a utility provides open access to transmission, the utility should be allowed to price freely. FERC can be assured prices are just and reasonable since the buyer can choose the lowest price among many suppliers.

If FERC cannot ensure that open access to transmission will be available, then the ICC believes that a two-part tariff is appropriate. The first part of the tariff should be a fixed reservation charge that gives the requirements customer the right to buy the output of a particular amount of capacity (kilowatts) at the marginal energy cost (per kilowatt hour) of the utility at the time of purchase. The reservation charge can be based upon the cost of capacity, the length of the requirements contract, and other variables. As explained in the body of these comments, the ICC feels that this type of two-part tariff has attractive pricing and incentive features. The reservation charge helps to assure that fixed costs are covered and thus reduces risk. The variable charge reflects marginal energy cost which signals scarcity to consumers instantaneously and eliminates the need for a fuel adjustment clause. It also ensures that plants with the lowest marginal cost are used first.

The nature of requirements customers presents an extraordinary opportunity for FERC to be the instrumental force in the development of competition in the electricity industry. The ICC stated in Phase I that it believes competition is workable for coordination sales. This recommendation is even more applicable to requirements sales because of their long-term nature. Buyers are likely to have more time to search out various sellers, bargain with them, and consummate an agreement that is tailored to their needs. Also, buyers have more to gain or lose over a long period so that they are likely to invest more time, effort, and resources to improve their sophistication in contracting. This bodes well for FERC's allowance of flexible, competitive prices because the buyers can be expected to look out for themselves. With unrestricted access to transmission, the local generator has no monopoly power

over the buyer. Contracts will be negotiated on equal footing, at arm's length.

The number of potential competitors that would enter the market for requirements sales would increase if access to the transmission grid were unrestricted. Again, relative to coordination sales, requirements sales are even more fertile ground for competition. This is because the assets of a generator are long lived, thus the expansion of opportunity for long-term contracts for requirements sales will help assure competitors that their fixed costs are more likely to be recovered. A generator takes on much more risk when he builds capacity with an eye to selling only coordination power. The short-term nature of coordination power and the volatility of the demand for it make covering costs a riskier proposition.

In the second part of Phase II of the NOI, FERC tries to come to grips with the regulatory allocation of risk. By its pricing policies and regulatory methods, it allocates risk between the consumer and the producer of electricity. Given that in a competitive market risks are borne freely at least cost, the regulatory allocation of risk can be no improvement and probably is inferior. Because the risk bearers under regulatory allocation do not bear the risk freely, one can infer that the ultimate cost of risk bearing is increased. That is, the economic agents that can bear the risk at lower cost are not the ones to which the risk is allocated. This places the costs of inefficient risk allocation on the backs of consumers since, ultimately, they must bear all the costs.

The present allocation of risk reduces a utility's incentive to invest extra time and effort before considering capacity additions since it is assured costs will be covered unless imprudency can be proved. Fuel adjustment clauses tend to reduce a utility's efforts to minimize fuel cost since it receives no benefits (profit) from doing so; all savings are passed on to consumers. Utilities gain only by minimizing costs for which estimates are used when a price is set in the rate case.

If open access is available, voluntary agreements to bear risk should be allowed. A competitive system would allocate risk efficiently at least cost.

If access is not guaranteed, the two-part tariff suggested by the ICC as a preferred pricing scheme should allocate risk fairly. The fixed reserve charge should help to lower the utility's risk and thus lower financing costs. It should also provide an incentive for consumers to smooth their demand and take more responsibility for servicing their peak demand. Therefore, the pricing policy allocates resources and helps allocate risk.

Both of the primary topics of Phase II, i.e. pricing and risk allocation, are handled most efficiently in a competitive environment. Competitive prices accurately signal consumers concerning resource scarcity and producers concerning production decisions. Risk is allocated most inexpensively in a competitive market to those that freely agree to bear it. This serves to provide the consumer with the lowest cost production. Any system of inflexible pricing can not hope to reproduce the same efficiency gains.

The ICC realizes that most changes in regulation are a step by step process. A competitive market for requirements services would provide a first step toward what may eventually be a system of devolved generation. The ICC encourages the FERC to act boldly to seize a valuable opportunity.

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	i
TABLE OF CONTENTS	v
I. INTRODUCTION	1
II. PERSPECTIVES OF THE COMPETITION IN THE ELECTRIC INDUSTRY	2
III. THE COMPETITIVE FUTURE OF THE ELECTRIC INDUSTRY - THE IMPLICATIONS FOR REQUIREMENTS CUSTOMERS	6
IV. REQUIREMENTS TRANSACTIONS	8
V. PRICING	9
A. Pricing Questions	12
B. Data Needs, Rate Forms, and Billing Determinants	15
VI. RISK ALLOCATION	21
VII. CONCLUSION	28

I. INTRODUCTION

The Federal Energy Regulatory Commission (FERC) in Docket RM85-17-000 is evaluating its present policies governing wholesale electricity transactions and transmission service. FERC's stated objectives are to determine whether its policies promote, or whether they impede, efficiencies in electricity markets and to evaluate alternative policies. The notice of inquiry is in two phases. Phase I (NOI-I) was issued May 30, 1985, and considered coordination transactions and transmission service. Phase II (NOI-II), addressed here, was issued June 28, 1985, and considers requirements service.

The Illinois Commerce Commission (ICC) is the state governmental body which regulates retail electric sales within Illinois. The ICC welcomes this investigation into methods of improving efficiency in the wholesale market and believes that such improvements would result in lower rates to retail customers. A review of the comments of the ICC in Phase I of the NOI provides a clearer perspective on the comments that follow.

The focus of these comments by the ICC is on pricing policy. The ICC believes that requirements customers are sophisticated enough to use competitive forces to help reduce the prices they pay for electricity. Given unrestricted access to transmission facilities, requirements customers can solicit bids from various suppliers and select the best bid. More important, their behavior is apt to induce lower production costs when high cost producers make their production methods more efficient in order to compete for buyers. Price may be reduced for all consumers as a spillover effect. Free competition in the market for requirements services can be a first step toward a fully competitive market for electricity. If a utility provides open access to transmission, the utility should be allowed to price freely. FERC can be assured prices are just and reasonable since the buyer can choose the lowest price among many suppliers.

If FERC can not ensure that open access to transmission will be available, then the ICC believes that a two-part tariff is appropriate. The first part of the tariff should be a fixed reservation charge that gives the requirements customer the right to buy the output of a particular amount of

capacity (kilowatts) at the marginal energy cost (per kilowatt hour) of the utility at the time of purchase. The reservation charge can be based upon the cost of capacity, the length of the requirements contract, and other variables. As explained in the text of these comments, the ICC feels that this type of two-part tariff has attractive pricing and incentive features.

Section II states the ICC's perspective on competition for electric utilities and summarizes the Phase I comments. Section III applies this perspective to the topic of this portion of the NOI, requirements service. Section IV briefly outlines the structure of the NOI. Section V considers pricing issues, and Section VI covers risk allocation. Section VII is the conclusion.

II. PERSPECTIVES ON THE COMPETITION IN THE ELECTRIC INDUSTRY

The ICC believes that greater reliance on competitive forces in the electricity industry where appropriate is crucial to improving its efficiency and to extending the benefits of that improved efficiency to consumers. Requirements and coordination transactions are appropriate areas for competition. Critical to the successful use of competitive forces is the creation of an environment which is conducive to competition. The generation sector of the electric power industry has the potential to be competitive. However, a key element in an effectively competitive market is a sufficient number of buyers and sellers. In the electricity industry these buyers and sellers would receive access to the wholesale market through the willingness of, or requirement for, a utility to wheel (transmit) power across its transmission system on a nondiscriminatory basis. This access would facilitate the sales and purchases of power by other entities. Access would foster the competitive market environment necessary for the effective use of flexible pricing schemes considered in this NOI.

Access to wheeling serves a similar function for both long-term requirements contracts and short-term coordination contracts: it increases the number of potential buyers and sellers. Requirements contracting may especially benefit because of the long-term nature of such agreements. Given the capital intensity of electricity production and the long lives of the plant

and equipment, more suppliers may be encouraged to enter the market if more assurance of demand is available. Long-term requirements contracts increase the number of potential suppliers and strengthen competition. This process is stymied if access to wheeling is not guaranteed.

Some specific points made by the ICC in reference to coordination sales are also applicable to requirements sales and are duly noted below.

- Regulation can be viewed as a substitute for competition where significant economies of scale are reaped by a single producer who effectively forecloses competition. Transmission and local distribution exhibit the characteristics of natural monopoly while generation of electric power does not. The ICC believes that the scarce resources of FERC, the ICC, and other regulatory bodies that govern public electric utilities are most efficiently allocated if they concentrate on transmission and distribution. Conversely, the regulator is apt to do more good in the generation sector by allowing competition to work in its place.

- It is the view of the Illinois Commerce Commission that substantial benefits may be obtained by moving toward a more competitive market for electricity generation. The current situation of higher prices in the face of abundant generation capacity is inconsistent with the behavior of a competitive market. Prices have not responded to changes in supply and demand. Consumers receive price signals that indicate scarcity at a time when supplies are more than adequate; conversely, prices are held down by regulation in periods of shortage, exacerbating the shortage. Competition in the generation sector of the industry would improve the price signals given to customers.

- The transition to greater reliance on competition is already in motion. The very issuance of the NOI shows a recognition by FERC of the importance of a careful consideration of the transition. The ICC urges FERC to be bold in its steps. The industry can be smoothly transformed into a competitive, market oriented industry by

providing access to the transmission grid and encouraging a series of events which will naturally follow. As the transition occurs, the benefits resulting from greater efficiency will increase. Ultimately, the generation sector of the industry may be devolved and independent providers of power would supply electricity to transmission and distribution utilities and other customers as well.

- Of primary importance in increasing the number of potential competitors, who are the key to a competitive market, is unrestricted access to transmission and distribution. FERC emphasized the importance of wheeling in Phase I, stating; "Availability of transmission services is a necessary element to competitive electricity markets" (NOI-I, p. 17).

- The ICC suggested that unrestricted access could be attained in two ways. First, the most immediate strategy would be to offer electric utilities more flexible pricing where an agreement to wheel is made. Second, and more far-reaching, is for FERC to petition Congress to give it the right to require unrestricted access to transmission and distribution.

- Natural outgrowths of unrestricted transmission are likely to be increased use of central dispatch and power brokerage and auction markets. Each encourages the efficient use of generation capacity. It is interesting to note that where competition with other fuels is the greatest, such as the Northeast, the regional electric power pools work much more like dispatchers or brokers.

- As the generation sector becomes more competitive, market based dispatch of generating plants will serve a region's load at least cost. It will also provide incentives by rewarding the low-cost producers with high utilization rates and penalizing the inefficient producers with low utilization rates. This encourages technological innovation and signals the expansion or contraction of capacity. Utilities have been notoriously slow innovators and are often criticized for poor capacity planning.

- Unrestricted access allows full diversity of supply which could result in the addition of electric generating capacity in relatively small increments as independent suppliers perceive increased demand. This would help alleviate the problems of temporary surpluses of capacity which occur when large discrete amounts of generating capacity are added by a utility.

- The provision of access is an important step toward an independent (devolved) generation sector. Such a sector would be fully competitive and have no need for rate-base regulation. Devolution could take a number of forms. All, or portions of, existing rate-based generating capacity could be designated as "devolved." That capacity, with regulatory approval, could then be placed in a holding company subsidiary that would earn its return on investment through its ability to market the electricity it produces. Alternatively, existing utility capacity could be removed from rate base and partially or completely sold. New additions to capacity either developed by a utility, a group of utilities, or through agreements between a utility and non-utility producers could be constructed on an unregulated basis.

- A devolved generation sector with access to the transmission grid could be expected to foster sophisticated spot and futures markets. A spot market would allow consumers, either individually or represented by their distribution utility, to purchase electricity at market-clearing prices. Futures markets would provide a market valuation of future capacity at known market rates, a utility could better evaluate and adopt a least cost strategy to meet future needs, and generators could better plan their own system expansion. Furthermore, companies would be able to "size" expansions more efficiently since a futures market would allow them an opportunity to market future capacity surpluses.

III. THE COMPETITIVE FUTURE OF THE ELECTRIC INDUSTRY - THE IMPLICATIONS FOR REQUIREMENTS CUSTOMERS

The nature of requirements customers presents an extraordinary opportunity for FERC to be the instrumental force in the development of competition in the electricity industry. Requirements customers are large buyers of power who are sophisticated enough to use competitive forces for their protection and benefit. Allowing requirements suppliers and their customers to compete through open access to wheeling would prove the desirability of devolution. The sophistication of requirements customers and the long-term nature of their supply contracts would insure a vigorously competitive environment. This approach will be most effective for requirements service given that coordination supply is largely residual power and buyers do not plan coordination purchases to much degree.

FERC defines requirements services as follows:

> Requirements service is a long-term, firm supply of capacity and energy to meet all or part of another utility's needs. It is used by buyers as a substitute for operating sufficient generation resources of their own. Buyers then resell the power to end-use customers or to other utilities. ...
>
> The long-term nature of firm power wholesale requirements service affects a utility's planning process and its investment and resource allocation decisions.(NOI-II, p. 3)

The ICC stated in Phase I that it believes competition is workable for coordination sales. This recommendation is even more applicable to requirements sales because of their long-term nature. Buyers are apt to have more time to search out various sellers, bargain with them, and consummate an agreement that is tailored to their needs. Also, buyers have more to gain or lose over a long period so that they are likely to invest more time, effort, and resources to improve their contracting sophistication. This bodes well for FERC's allowance of flexible, competitive prices because the buyers can be expected to look out for themselves. The local generator has no monopoly

power over the buyer when the buyer has unrestricted access to transmission. Contracts will be negotiated on equal footing, at arm's length.

Some evidence already exists to show that requirements customers value and utilize competing sources of generation. In fact the FERC notes this fact,

> Many requirements customers appear to have at least some choice among alternative sources of bulk power. ... Some have choices among alternative suppliers. ... Others can generate power from their own facilities as well as purchase power from requirements suppliers. Available information indicates that slightly more than half of all wholesale requirements sales are to partial requirements customers, who by definition have access to alternate sources of bulk power for at least some of their load.(NOI-II, p. 12)

The number of potential competitors that would enter the market for requirements sales would increase if access to the transmission grid were unrestricted. Again, relative to coordination sales, requirements sales are even more fertile ground for competition. This is because the assets of a generator are long lived, thus the expansion of opportunity for long-term contracts for requirements sales will help assure competitors that their fixed costs are more likely to be recovered. A generator takes on much more risk when he builds capacity with an eye to selling only coordination power. The short-term nature of coordination power and the volatility of the demand for it make covering costs a riskier proposition.

An injection of competition into the market for requirements sales is likely to be a powerful force for cost savings. Power pools should become more like centralized markets in which generators offer capacity to be dispatched and requirements customers pay a market clearing price. A preliminary study recently performed by the ICC staff, indicates that centralized dispatch could save a substantial amount of fuel costs in Illinois. A competitive market would not allow these gains to go unrealized.

IV. REQUIREMENTS TRANSACTIONS

On page 1 of the NOI (Phase II), FERC announces its purpose.

> Efficiency in requirements markets may be affected particularly by our policies regarding pricing and risk allocation. Thus, Phase II seeks comments regarding how our regulation of requirements service, especially as it relates to pricing and risk allocation, affects efficiency and how it might be changed to encourage greater efficiency.

The ICC believes that competition would result from a policy of unrestricted access to transmission. Competition would produce cost-based prices, a distribution of gains that has attractive incentive features, and less need for regulatory intervention and monitoring. The efficiency gains that will flow from such a strategy should surpass a more mechanistic approach to the problem such as substituting "better" rules for "poor" ones. In line with this approach, pricing flexibility should be allowed whenever open access to transmission is offered concurrently. On the other hand, when access to transmission is not provided by a utility, a two-part tariff is more appropriate. Such a tariff should consist of a reservation charge set by FERC and a variable energy charge based upon the actual marginal energy costs of the utility.

Phase II of the NOI proceeds in two steps. In the first step pricing is considered. Proper pricing is most important for allocative efficiency. Relatively high priees induce substitution away from electricity toward lower cost forms of energy. A price schedule with a lump sum charge to reserve capacity discourages buyers from reserving extra capacity when it is not reasonably expected to be needed. The important point is that price is a signal. When price is set efficiently, it allocates the available supply of electricity to the highest valued uses.

The second step of Phase II considers risk. Risk can be defined as the variability in profit and can affect the costs of production of electricity. The higher the variance of profit, the higher the expected return investors will require to hold the utility's securities. Higher risk implies higher

capacity financing cost. Producers are always intent on attaining the highest level of expected profit given the level of risk, or the lowest level of risk given the level of profit. Profit and risk are the signals which influence the behavior of producers. Under regulation, if profit is fixed at the allowable rate, risk becomes the lone signal to producers. Risk can induce producers to favor a higher cost form of production over a low cost form, if the high cost form of production insulates the firm from some risk. Therefore, it is important to consider the way that FERC affects risk.

The next section considers the proper signal to the consumer, i.e., price. Section VI considers the proper signal to the producer, i.e., risk. However, pricing may affect risk and visa versa. The two are not independent as can be seen in the following sections.

V. PRICING

Allocative efficiency requires that resources are allocated to their highest-valued use. Economic theory demonstrates that setting price equal to marginal cost ensures allocative efficiency. Marginal cost is the addition to total cost caused by the production of an additional unit of output. The concept of marginal cost is widely endorsed by economists. But marginal cost pricing is difficult to implement within regulatory constraints. Mechanistic rules based upon the regulator's idea of approximate marginal cost are not appealing when other alternatives exist. A preferred solution is to create a market environment conducive to competition. By providing open access to transmission, utilities will be given incentives to price according to marginal cost. It is not necessary to provide pricing rules to attempt to duplicate the market process.

In absence of open access, monopoly power exists. Under such circumstances, the utility cannot be expected to set efficient prices and FERC needs to provide oversight of prices. One reasonable method of pricing is to price according to a reservation charge which gives the customer the right to purchase a given quantity of electricity at the seller's marginal energy (incremental) cost. Such a pricing mechanism recognizes the importance of marginal pricing and the high fixed cost of long lived plant. FERC would set

the reservation charge and the utility's marginal energy cost would be used for the per unit (kilowatt hour) charge. While not as efficient as competitively determined prices, these prices should be as efficient as is possible without access and competition.

FERC's pricing policy as it stands now is presented on page 9 of Phase II of the NOI.

> nearly all of the requirements rates approved by us have been based on fully distributed embedded costs,
>
> ...
>
> Our concern stems from the seeming inconsistency between pricing of requirements and coordination services. In most of the coordination rate schedules and tariffs on file with us, the price of energy is keyed to some measure of incremental running costs.

The ICC believes that many of the concerns of FERC can be relieved with a consistent pricing policy enforced largely by competitive pressures. With open access, rate structures set by FERC are not needed.

A two-part tariff with flexible parts is recommended if open access is not available. First, a reservation charge can be set by FERC. This charge could reflect many things including the cost of base load plant, the buyer's load characteristics, and the cost of transmission if the same utility produces and transmits the power. For example, the reservation charge per kilowatt could vary by time of year based upon the utility's capacity relative to load. The amount of capacity the customer reserves could also vary based on its needs. The customer should be required to reserve the capacity it needs in advance so that the utility can plan plant maintenance and capacity additions. The customer would pay a reservation charge that reflects the profile of capacity he requires over the contract period.

The second portion of the price schedule would be the marginal cost of energy. This cost would be the actual marginal energy cost at the time of purchase, not a projected cost.

The difference between requirements service pricing and coordination service pricing should be that requirements customers pay a reservation charge and buy electricity at marginal energy cost. Coordination customers pay no reservation charge but pay a price based upon a split-the-difference rule, assuming access to wheeling is not provided, otherwise price is set freely. FERC should not be concerned if requirements sales and coordination sales are priced differently; they are different services. Coordination sales, being short-term in nature may reflect only marginal energy costs.

Assuming that unrestricted access to transmission is available, contracting between the supplier and the buyer should result in price differences between customer classes where the cost of service differs. In a competitive environment, suppliers will bid to serve potential customers by offering the most attractive rate structures. If the costs of implementing seasonal rates, time-of-day rates, or rates based upon load characteristics are outweighted by the benefits, those types of rates will be offered. When access is provided, it is unwise for the regulator to decide which are cost effective.

The use of average embedded costs obviously induces inefficiencies because buyers see a price based on average costs instead of marginal costs. This situation leads to the employment of high marginal cost plant that would not be used in a competitive environment with flexible pricing. Similarly, price based upon average cost implies that arbitrage by buyers is possible. For example, a requirements buyer could take power from a utility at average cost and then resell it as coordination power at marginal cost. The difference between the two prices is absorbed by the generating utility's other customers or shareholders.

The problem with average cost rates does not appear with a two-part tariff that contains an energy charge that reflects marginal cost. Since the reservation charge is sunk, buyers make decisions based only on marginal energy cost. FERC suggests that a marginal capacity charge be employed. The ICC believes that capacity costs should be reflected in the reservation charge. The reservation charge becomes an option to buy a fixed number of kilowatts from a supplier at marginal energy cost. The charge would be set based upon customer load characteristics, expected capacity utilization, and

contract time horizon as well as other factors. Thus a reservation charge could supplant a marginal capacity component. The primary support for reservation charges comes from the long lived nature of generating plant. Producers may need some assurance that fixed costs will be covered. This procedure would help lower risk and make financing less costly.

A. Pricing Questions

1. Do the costs of providing wholesale requirements service vary systematically by time-of-use? If so, is there any reason why we should not establish prices for requirements service that vary by time-of-use? Are there any benefits from continuing to set prices that do not vary by time-of-use?

Costs do vary by time-of-use; however, a fixed or mechanistic time-of-use schedule of prices is unwarranted. The ICC believes that requirements sales should be treated much like coordination sales, i.e., based on marginal energy cost. The difference is that requirements buyers reserve capacity for a long period and thus should pay a reservation charge. The charge gives them the right to buy a fixed amount of energy at marginal energy cost. Employing a reservation charge to cover capacity costs permits better long run planning for buyer and seller. It would also lower the risks, and therefore costs, of power supply.

2. a. In determining whether to adopt time-of-use marginal cost pricing for wholesale requirements service, should we be concerned if any wholesale customers cannot reflect those time-of-use marginal cost prices in their retail rates? What harm would be done by adopting marginal cost pricing for wholesale requirements sales if those signals were not transmitted through to retail rates and/or if retail customers did not respond to these price signals?

b. What harm would be done by adopting marginal cost pricing if wholesale customers could not or did not respond efficiently to marginal cost-based wholesale rates?

The ICC feels that FERC's sphere of influence is over the wholesale buyers and sellers. Its primary purpose is to ensure that the proper signals are given to them. Since it has little influence over retail rates, it should not distort its policies

to reflect the distorted policies of retail suppliers. Better wholesale rates may help to induce better retail rates. FERC must assume that retail customers have some ability to influence their suppliers so that retail pricing schemes reflect their wishes. Even if consumers do not respond to price signals, producers may. Benefits can still be realized there.

3. a. Would prices based on average embedded costs encourage greater efficiency in wholesale requirements markets than prices based on marginal costs?

No. Marginal cost pricing is superior. Pricing by average embedded cost produces a number of inefficiencies. FERC notes that improper price signals are sent to consumers if average cost is used. Also, in a competitive market, the lowest marginal cost plants would be used; fixed costs are ignored. If average cost pricing is used, some high marginal cost plant may be employed that inefficiently displaces low marginal cost production.

b. Do the prices of fuels or other goods (i) that are substitutes to or complements of electricity, or (ii) that are inputs to the production of electricity, significantly differ from their respective marginal costs? If so, would average cost pricing for wholesale electricity encourage greater efficiency than marginal cost pricing when the prices of these related goods are not based on marginal costs?

Other goods that are substitutes or complements for electricity should sell at marginal cost if the markets they trade in are competitive. However, even if they do not sell at marginal cost, there is no reason to believe that pricing electricity at average cost would right this wrong.

c. Should we establish wholesale electricity prices based on marginal costs in areas where retail rates are not based on marginal principles?

As noted in question 2, FERC should not respond to seemingly improper pricing at the retail level with improper pricing at the wholesale level. This action would benefit no one and would harm productive efficiency.

4. Is it possible that marginal cost pricing could worsen the load factors of some utilities? If so, explain how this result would occur and whether this result would be harmful to the utility or its customers?

Marginal cost pricing could be expected to help smooth out load. Prices based on actual marginal energy costs would result in higher prices when demand was high (reducing peak usage) and lower prices when demand was low (increasing off-peak usage).

5. If wholesale prices were based on marginal costs, would price squeeze situations develop in a significant number of markets? If so, what significance should this have on our decisions regarding whether to require wholesale prices to be based on marginal costs? Should we permit state policies, because of their price squeeze effects, to dictate our implementation of the Federal Power Act?

Price squeeze is a potential problem; however, it exists now and is unrelated to the pricing policy. Marginal cost pricing should not aggravate the situation. FERC should rely on the idea that it is introducing more competition into the market. Competition penalizes those who operate or price improperly. Thus price squeeze could eventually be eliminated when competitive pressures build, forcing policy changes on the part of the inefficient. An eventual deregulation of generation would equalize prices throughout the generation sector.

6. If wholesale requirements prices are based on marginal costs, should these prices be based on short-run or long-run marginal costs? Why?

The ICC recommends that, where competition is not available through access, energy charges should be based on short run marginal (energy) costs. Capacity costs are more easily dealt with in a reservation charge. Where there is competition

and access, firms will find it in their interest to price according to marginal cost, relieving the FERC of its price setting responsibility.

7. a. Given that the revenue requirement would be based on embedded costs, what adjustments should be made to marginal cost prices so as to cause the least distortion to efficiency and avoid the Federal Power Act proscription against undue discrimination? Explain your answer.

Reservation charges could be adjusted so that revenue requirements are met. Since the reservation charge is a fixed charge, less distortion should result from an adjustment in this portion of the tariff. Adjusting marginal energy charges would result in more inefficient short-run behavioral changes on the part of consumers.

b. Would a pricing system based on average embedded costs encourage greater efficiency in wholesale requirements markets than a pricing system based on marginal costs with such adjustments?

No. The revenue requirements adjustments to reservation rates would cause some distortion, but less than would occur with an average embedded cost method. However, a competitive market price based on access to wheeling is the best solution.

B. Data Needs, Rate Forms, and Billing Determinants

It is the opinion of the ICC that mechanistic rules and rate forms for the implementation of marginal cost pricing are not needed and are counterproductive. A competitive market will ensure that cost-based prices are charged. Embedded cost data for a transmission utility may be needed, since the monopoly over transmission would still exist. As is well known, competitive markets are a means to economize on information. Price reflects the combination of producer and consumer information. Thus as FERC moves the wholesale market closer to a competitive market, its data requirements will fall.

If access is not available, FERC may wish to request actual system marginal energy cost in order to decide if marginal cost pricing is being employed. This same data can be used to examine coordination sales. Data used to set reservation charges may be gathered as well. Various customers will have different load characteristics or time horizons and reservation charges should reflect these differences.

FERC appears to be overly concerned with rate form and billing requirements in NOI-II. The ICC agrees with FERC that "billing determinants must match the service and period for which the prices were intended to apply". The NOI-II points out the deficiencies of the noncoincident peak and demand ratchet billing methods. However, the alternative methods offered in the NOI-II are overly complex and do not set prices using actual costs. The methods are described on page 30 of the NOI-II.

> One possible alternative pricing method would be for the utility to announce, in advance, those time periods when it expects capacity to be nearly fully utilized. Customers' demand bills would be based on their purchases during these periods.
>
> A second alternative would be to eliminate demand charges. In their place, a time-varying one-part rate could be employed. Customers' bills would be calculated by multiplying the rate in effect for the period, announced in advance, by the customer purchases in that period.

The problem with these approaches is that they are costly and actual costs are not used. Projected costs only approximate actual costs. Since actual costs are available, they should be used. Reservation charges could be based on actual cost of the capacity reserved. Prices reflecting marginal energy costs could be obtained through a brokerage system nearly instantaneously so that no differences in price and cost would exist due to poor predictions of peak demand. Customers could also call the utility directly if a message service was programmed to announce the present price to callers. More important, buyers are likely to know, or quickly learn, when price will be high. For example, in the summer, when a day turns out unusually warm, consumers would learn that marginal costs will be high. The ICC urges FERC to take advantage of all of the

resources available. The consumer's ability to learn and to respond is one of the most important resources. This should reduce the unneeded burden that new regulatory rules would impose.

10. a. Should we continue to employ the two-part rate form for wholesale requirements sales? Why?

Not in its present form. Using average energy costs provides no signal of costs varying through time. A reservation charge and energy charge based on actual marginal cost would provide the correct signal.

b. If so, what billing determinants for assessing demand charges to customers would most effectively promote efficiency? (Possible options include, e.g., noncoincident peak demands; coincident peak demands, established at the end of the billing period; and purchases during a period, announced in advance, when the seller's capacity utilization rate is expected to exceed some specified level.) State the reasons for your answer.

The customer's peak demand relative to the available capacity of the utility should form the basis of the reservation charge. Customers should have the right to resell energy provided up to their reserved quantities. This would provide a secondary market for the reserved capacity.

c. Do demand ratchets promote efficiency: Why or why not?

No. Ratchets may not signal that capacity is in short supply when it is. They also charge for capacity when excess capacity exists.

d. Alternatively, should we abandon the two-part rate form in favor of time-varying one-part rates? Why or why not? What benefits do two-part rates have over one-part rates?

One-part rates would essentially be two-part rates with a zero reservation charge. As previously stated,

reservation charges may be important to long-run planning and risk reduction.

11. What conditions, if any, exist at present to justify continuation of a fuel adjustment clause? Explain how a fuel adjustment clause improves efficiency when the cited conditions exist.

A fuel adjustment clause (FAC) is useful when price is fixed for a long period of time by the regulator. In that case, adding an FAC can improve price signals somewhat. However, since FAC adjustments often occur with a lag, month to month adjustments may serve little useful purpose as a signal. For example, large fuel cost increases due to an unusually warm August, when collected from customers that buy electricity in September, serve only to discourage buying in September. This can occur even though September fuel costs were relatively low. An FAC that works with a lag only serves to assure financial soundness of the utility and give signals on general fuel cost trends. It serves little short run signaling function.

A two-part tariff with a variable energy charge performs all of these functions. With the two-part tariff offered in these comments, an FAC is not needed. Actual marginal costs, including fuel costs, are collected. No lag exists and the proper signals are given.

12. If any FAC is retained, is there any benefit to allowing suppliers to true-up after the billing period, that is to adjust customer bills after the end of the billing period to compensate for fuel clause revenue collections that exceeded or fell short of actual fuel costs?

This mechanism assures utilities that fuel costs will be recovered. It also assures consumers that fuel cost over-collections will be refunded to them.

13. For those utilities that base their present fuel adjustment clause on historical costs, are there any reasons why these clauses should not be modified to reflect only estimates of

contemporaneous fuel and economic purchased power costs? If so, what are these reasons?

A clause based upon contemporaneous fuel costs may be used if rates continue to be fixed by FERC. If FERC can make accurate estimates of what fuel costs should be, then those estimates should be used. Utilities will be given more incentive to keep fuel costs below the estimates. Again, a rate based on actual marginal energy cost would be preferred.

14. Should we allow flexible prices within a pre-approved zone? Why or why not? If so, how should the boundaries of that zone be determined? Should we establish only price ceilings and permit any price below the ceiling to be charged?

Sufficient competition should result to keep prices in line with costs if access to transmission is unrestricted. In such an environment, limited price zones can only hinder efficiency. Where access is not provided, flexibility may only result in monopolistic exploitation.

15. a. How would efficiency be affected by requiring the seller to charge the same price within the zone, or below the ceiling, to all customers within a customer class at any given time?

The price per kilowatt hour should be set at marginal energy cost. It should not vary with the buyer. The reservation charge may vary with the characteristics of the buyer.

b. Suppose that a utility were allowed to offer different prices to different customers within a customer class at any given time. Would any customers be harmed by this policy as long as any revenue shortfall resulting from differing prices being charged below the Commission-approved ceiling came entirely at the expense of the utility?

Identical customers should be treated identically. If true differences exist between individual customers these could be reflected in the reservation charge. The marginal energy cost should be the same for any customer

at a point in time. But the FERC need not worry about unfair discrimination between customers as long as sufficient competition exists. With open access, if a utility prices a customer improperly, that customer could simply find a utility that will offer a competitive price and have the electricity wheeled.

16. a. What benefit would result if we allowed more flexibility in the timing of capital cost recovery? If flexibility is desirable, how should this be accomplished?
    b. What benefits, if any, would result from limiting the frequency with which utilities could change the amount of capital costs recovered in rates?
    c. Suppose that utilities were permitted flexibility in recovering capital costs between rate filings. What benefits, if any would result from allowing utilities to bank any unrecovered capital costs for future recovery?

If access is not available, flexibility may result in monopolistic pricing. On average, rates set in competitive markets just cover costs. Individual utilities may over or under recover at different times due to demand changes and to their relative efficiency of production.

Manipulating capital recovery could equate revenue requirements to actual revenues over time if no access exists, but this seems awkward. It is just as easy to allow revenue requirements to fluctuate by adjusting the rate of return, or both the rate of return and depreciation. The point is that a fluctuating revenue requirement may only facilitate monopoly pricing.

17. What benefits would result from continuing the current fixed method of recovering capital costs over time?

Without open access to transmission, a fluctuating revenue requirement could result in exploitation of monopoly power. A fixed capital recovery method helps to avoid this problem.

VI. Risk Allocation

In this section of Phase II of the NOI, FERC investigates questions relating to the regulatory allocation of risk. By its pricing policies and regulatory methods, it allocates risk between the consumer and the producer of electricity. Given that in a competitive market risks are borne freely at least cost, the regulatory allocation of risk can be no improvement and probably is inferior. Because the risk bearers under regulatory allocation do not bear the risk freely, one can infer that the ultimate cost of risk bearing is increased. That is, the economic agents that can bear the risk at lower cost are not the ones to which the risk is allocated. This places the costs of inefficient risk allocation on the backs of consumers since ultimately, they must bear all the costs. FERC is aware of this problem as explained on page 39 of NOI-II.

> In unregulated competitive sectors of the economy, business risk initially lies with the investors of the selling firm. Any shifting of business risk to the seller's customers occurs by mutual voluntary agreement and, presumably, takes place because the buyer is better able to carry out activities that minimize costs or is able to bear risk more cheaply. By contrast, in areas under our jurisdiction, regulatory policies largely determine the allocation of risk between the buyers and sellers.

If the utility's obligation to serve the requirements customer were eliminated and open access were available, there would be no reason for regulators to allocate risk. Under regulation, an implied contract exists between the consumer and the utility which is policed by the regulator. The consumer agrees to buy only from the utility. The utility agrees to serve the customer's needs and to price according to the dictates of the regulator. If the utility spends money on a plant it subsequently abandons, the consumer bears the costs even though these costs might have been imposed on the utility if it had produced for a competitive market. This is because the utility may have started the plant because it projected that consumers would need it in the future. Its obligation to serve may have induced it to build a plant that it might otherwise have avoided. On the other hand, utilities bear risks that unregulated firms do not, for example, regulatory lag. If the FERC is truly

interested in introducing competition to the electricity industry, the obligation to serve requirements customers must be reconsidered.

18. a. Does the present allocation of risk reduce incentives for jurisdictional utilities to operate efficiently? Why or why not?

The present allocation of risk reduces a utility's incentive to invest extra time and effort in considering capacity additions since it is assured costs will be covered unless imprudency can be proved. Similarly, fuel adjustment clauses tend to reduce a utility's effort for fuel cost minimization since it receives no benefits (profit) from doing so; all savings are passed on to consumers. Utilities gain only by minimizing costs for which estimates are used when a price is set in the rate case.

b. Does shifting risk to customers reduce a jurisdictional utility's incentives to minimize costs and/or transmit proper price signals? If not, why not?

Yes, for example, consumers bear all the risk associated with fuel costs if an FAC is used. Utilities have little incentive to minimize fuel costs because of the FAC.

c. How is the public interest served by the traditional allocation of risk between sellers and buyers of requirements service?

The public interest is not served. The allocation creates inefficiencies and raises the price to consumers.

19. In general terms, when is the public interest served by allocating any business risk away from jurisdictional utilities and onto customers? What are the important factors that bear on this allocation of risk? How, if at all, should the obligation to serve affect the allocation of risk? Do customers ever have greater opportunities for risk diversification than their supplying utilities (e.g., through greater diversification of investments)? If so, how should this factor enter into the general question of risk allocation?

General business risk and industry-wide risk are borne by customers in a competitive market. For example, general inflation of input prices that affects all producers is usually passed on to consumers in the form of higher product prices. This is reasonable because consumers require signals concerning the relative scarcity of goods. Firm specific risk is borne by shareholders. For example, poor production efficiency due to poor management is not passed on but is absorbed by shareholders in the form of lower returns. This arrangement provides an incentive for shareholders to monitor and discipline managers.

The obligation to serve tends to cause utilities to concern themselves with always having enough capacity to serve all the demand. This is not so in a competitive market. Furthermore, when demand is unusually high, firms raise prices quickly which discourages buyers, and then when demand falls off, prices fall. This helps smooth demand since consumers learn this pricing scheme and shift some consumption away from peak.

Utilities are not allowed to vary prices, and thus they cannot easily smooth demand. More important, they are required to be prepared to serve demand even at peak. Thus, extra capacity that would not be built if markets were competitive is built to serve peak. This fact along with pricing inflexibility between rate cases tends to increase the risk borne by a utility relative to a competitive firm. Between rate cases, there is no guarantee that revenue requirements will be earned. However, if rate cases could be settled instantaneously, consumers would bear all the risk of excess capacity. They pay for all used and useful capacity. Thus the extra risk imposed by the obligation to serve is largely borne by consumers except between rate cases. This allocation of risk does not occur because consumers bear risk more cheaply than shareholders. The arrangement occurs because an extra risk is imposed upon the utility that competitive firms do not experience. This

must be offset by a concession by consumers that protects shareholders. If one were to abolish the obligation to serve requirements customers and also implement open access, consumers would no longer be liable for the costs of excess capacity. Furthermore, the variance in profits due to excess capacity would induce utilities to try to smooth load through innovative pricing as well as encourage better capacity planning. By not mandating the allocation of risk, FERC would reduce the cost of bearing the risk.

20. Does the current existence of capacity in excess of peak demands arise, partly or wholly, from the past allocation of risk?

This excess capacity probably results, at least partly, from the allocation of risk. Traditionally, utilities have not borne the risk of excess capacity. It is interesting to note that some utilities have recently been penalized heavily for having excess capacity. One might expect that utilities will be less responsive to their obligation to serve. Since they still retain exclusive territories, shortages of power are more likely since pricing is still inflexible.

21. Could a regulatory system be developed that allows the allocation of risk to be determined through mutual agreement of jurisdictional utilities and customers? For example, would the public interest be served if all business risk were initially allocated to sellers but any voluntary agreement by a customer to bear some of that risk were accepted by us? How would such a regulatory system produce more efficient behavior?

If open access is available, voluntary agreements to bear risk should be allowed. A competitive system would allocate risk efficiently. As long as multiple suppliers are available to a buyer, the outcome of the risk allocation process through contracting would allocate risk properly. Note that risk is allocated to the economic agent who bears it most cheaply; however, this includes the net benefits of behavioral changes due to the contract.

For example, car insurance often comes with a deductible. Even though the insurance company's shareholders can bear risk more cheaply than a policy holder, a deductible places some risk on the policy holder. This is explained through the fact that the deductible induces the policy holder to drive more carefully since minor charges for small accidents are borne by him. If no deductible existed, the policy holder might not take as much care to avoid more common fender-bender accidents thus imposing extra losses on the insurance company. The deductible keeps insurance premiums down. The policy becomes insurance against less common serious accidents which the insurance company knows the policy holder has an interest in avoiding, i.e., his health.

The parallel to electricity might be interruptible service. A buyer might agree to interruption in his service at the utility's discretion. This would lower the cost to the customer because the utility could cut its peak by dropping the customer's load. Similarly, customers may contract to receive a certain amount of firm power less than its peak. It could bear the risk of finding a coordination supplier when its peak occurred. By not imposing a service responsibility upon the utility for all its power needs, the consumer could negotiate lower rates. FERC's role should be to help assure competition through encouragement of unrestricted access to transmission. Without open access, a utility could impose its monopoly power on consumers through price or through the risk terms of a contract.

22. a. Should demand rates continue to be designed based on expected peak purchases, even when expected peak purchases are significantly less than capacity? Why?
    b. Alternatively, should demand rates be designed based on a target capacity utilization rate that would not vary with actual peak period capacity utilization? If so, how should that target capacity utilization rate be determined? If not, what harmful effects would result from this policy? What effect would allowing flexibility in recovering capital costs over time have on the

desirability of using target capacity utilization rates to design demand rates?

When access is not available, demand rates need not be based on peak purchases. A more effective method would be to allow customers to reserve capacity through a reservation charge. This method has some attractive features. First, the charge could be based upon the characteristics of the customer. It could be designed to encourage the customer to take more responsibility for his fluctuations in demand. This could be cost effective for the following reason. Electricity production and transmission is highly capital intensive. Utility plant requires long lead times for construction and is long lived. This implies that financing costs are extremely important in determining the final cost of production. Lower risk for the utility can result which decreases the cost of capital, lowering total costs.

If FERC introduces a target utilization rate, it has the problem of getting an unbiased forecast or an appropriate rate to use. Of more concern is the fact that the behavior of the utility and the customer will be determined by this rate. A variable demand rate would provide signals, the problem is whether these signals would be those a competitive market would send. In a system of open access, FERC would not have to worry about setting rates at all.

23. a. What policy regarding the distribution of the costs of abandoned plants between utilities and customers would most encourage efficiency? Why?

The most efficient way to decide the distribution of costs of abandoned plant would be to let the market decide. Where access is provided, contracts between the utility and its customers might include provisions for customer allocation or the utility might bear all the

costs. For example, a large plant might be owned partially by many utilities so that abandoned plant costs are borne by the group. This would help reduce the risk borne by any single utility. A policy based upon market competition would be best.

b. Would this policy depend on whether the plant is jointly owned by more than one utility? If so, how?

No.

c. What factors, other than economic efficiency, should be used to determine how abandoned plant costs should be distributed between utilities and customers?

In competitive markets, efficiency is the only criterion.

d. Even if the decision to begin construction was prudent and the abandonment decision was timely, how would the public interest be served if we continued to allow these costs to be amortized and recovered from ratepayers?

If the utility has an obligation to serve, allocating costs to consumers may lower risk for the utility and thus lower financing costs.

24. a. If some of the risk of increased fuel costs were shifted onto the jurisdictional utility (e.g., by fixing the entire energy rates (including the fuel portion) between general rate filings), would this alternative policy encourage the minimization of fuel costs?

Certainly fixing energy rates will encourage utilities to cut energy costs since savings flow directly to them in the form of higher profits. However, in periods of fuel price inflation the utility would suffer losses due to conditions beyond its control. Thus, whereas use of a fuel adjustment clause encourages the inefficient substitution of fuel for other inputs, fixed fuel charges could induce inefficient substitution from volatile fuel expense toward more stable cost inputs.

b. What benefits would result from continuing to allow automatic rate adjustments for changes in fuel costs?

The utility is assured that its fuel cost will be recovered thereby reducing its risk. However, since this risk is transferred to the customer, it is likely the total cost of bearing risk is increased above that which would occur under a market determined allocation. The customer is assured that only fuel costs incurred are paid for. However, the customer does not have any assurance that the costs incurred are the minimum possible.

c. Are there alternative policies regarding the recovery of fuel costs that would better encourage the minimization of fuel and other costs? If so, what are they, and how would they encourage cost minimization?

In competitive markets for other energy sources such as coal, oil, and gas, contracts often contain escalator clauses to assure the producer that at least part of his volatile input costs are borne by consumers. For example, a price index may be used to determine the amount of the price change to be passed on to buyers. Still the producer bears the difference between the costs of his inputs and the costs determined by the index. If the index happens to be an average of all other producers cost, the individual producer can lose or gain if his costs are above or below the average respectively. Some index of fuel costs could be used, adjusted for a utility's fuel mix, that would only allow the average amount of fuel costs to be passed along to consumers. Since the utility would realize savings or cost relative to the index, it would have strong incentives to minimize fuel costs.

VII. Conclusion

The Illinois Commerce Commission believes the present inquiry into wholesale electricity transactions and transmission services is both timely and constructive. It is timely in that differences in costs and capacity

availability provide the potential for substantial increases in efficiency in the production of electricity. It is constructive in that FERC is wisely considering making greater use of market forces. Requirements service represents an unusual opportunity for the FERC to allow sophisticated consumers an opportunity to use market forces to their benefit.

This inquiry is concurrent with an inquiry on natural gas regulation (Docket RM85-1-000). Proposed rules resulting from that inquiry provide for increased reliance on market forces to ensure good performance in that industry. The ICC submitted comments in that inquiry which strongly supported such an approach. The ICC also submitted comments on Phase I of this NOI concerning coordination sales.

The ICC firmly believes that greater competition in the electric industry will provide substantial benefits to the nation. FERC can be instrumental in leading the progression to competitive electric markets. Requirements sales represent the important first step which should produce immediate benefits. Services which are less subject to competition now should become more so as a spillover effect of competitive requirements service. A relaxation of regulation of those services will be smoother as a result.

As mentioned in the ICC's previous response, FERC should encourage competition in wholesale electricity transactions through the encouragement of nondiscriminatory access to transmission services. This access is crucial since the transmission network embodies the monopolistic element in the electricity industry. Workable competition will not result unless this monopolistic element is controlled.

Both of the primary topics of Phase II of this NOI, i.e. pricing and risk allocation, are handled most efficiently in a competitive environment. Competitive prices accurately signal consumers concerning resource scarcity and producers concerning production decisions. Risk is allocated most inexpensively in a competitive market to those that freely agree to bear it. This serves to provide the consumer with the lowest cost production. Any system of inflexible pricing can not hope to reproduce the same efficiency gains.

The ICC realizes that most changes in regulation are a step by step process. A competitive market for requirements services would provide a first step toward what may eventually be a system of devolved generation. The ICC encourages the FERC to act boldly to sieze a valuable opportunity.

LIBRARY U. OF I., URBANA-CHAMPAIGN

UNIVERSITY OF ILLINOIS-URBANA
3 0112 077511431